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Lynch, J.D. and M.C. Ardila-Robayo. 1993. *Eleutherodactylus anatipes.*

Eleutherodactylus anatipes Lynch and Myers

Eleutherodactylus anatipes Lynch and Myers, 1983:516. Type-locality, "Maldonado, Provincia Carchi, Ecuador, 1410 m." Holotype, University of Kansas Museum of Natural History (KU) 177626, a subadult female collected by T. Berger on 20 May 1977 (examined by authors).

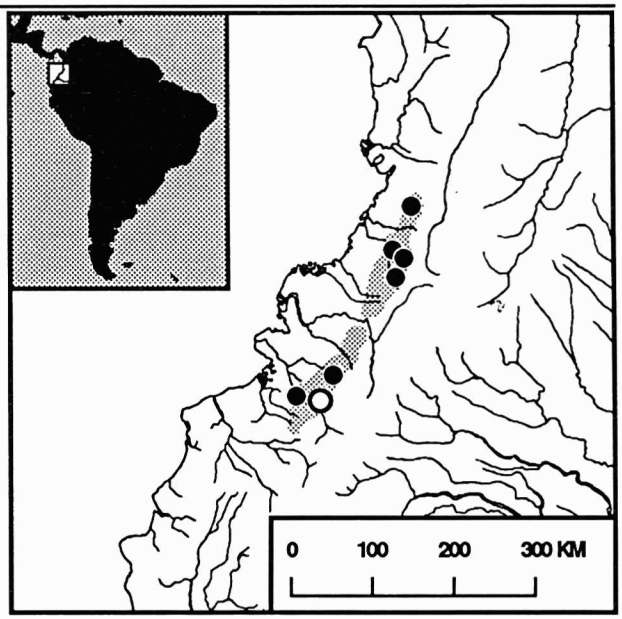
• **Content.** No subspecies are recognized.

• **Definition and Diagnosis.** *Eleutherodactylus anatipes* is a large species (four adult males 42.9-64.3 mm SVL, one adult female 98.6 mm SVL) of the *rugulosus* group of the subgenus *Craugastor.* This species is distinguished from all others of the group by having extensive toe webbing (to disks except on 4th toe) and by lacking an inner tarsal fold. Webbing on the 4th toe leaves 1-2 phalanges free of webbing. The only other species of *Craugastor* having comparable toe webbing is *E. zygodactylus* which has an inner tarsal fold. The skin of the dorsum in males (and in some juvenile females) bears spicules on the low warts and ridges. The skin of adult (and subadult) females bears low warts and ridges but is smooth. The largest juvenile females found are 48.8 and 56.2 mm SVL. Four large, but juvenile males, are 41.3-43.8 mm SVL. Frogs are olive-green above with black markings. The markings and short ridges are edged with orange to brick-red. The throat is creamy-white to gray, spotted with brown. The venter is pale yellow. The posterior surfaces of the thighs are yellow with brown mottling. The only adult female found had pink blotches on the webbing of the toes.

So far as is known, *E. anatipes* is mute. Males have vocal slits and large white nuptial pads on the thumbs.

• **Descriptions.** The original description of Lynch and Myers (1983), based on two juvenile males and two subadult females, is the only description available.

• **Illustrations.** Lynch and Myers (1983) provided a black and white photograph of the holotype and a drawing of the foot of a paratype. Lynch and Burrowes (1990) provided a black and white photograph of a juvenile.



Map. Distribution of *Eleutherodactylus anatipes* in northwestern South America. The large, open circle marks the type-locality. Other known localities are indicated by solid circles.

• **Distribution.** *Eleutherodactylus anatipes* is known from only two localities in Ecuador and five localities in Colombia at elevations between 100 and 1500 m. All records are from very near streams where the frogs are found sitting on rocks in or beside streams. The same microhabitat is occupied by *E. anomalus, E.*

Figure. An adult female *Eleutherodactylus anatipes* (ICNMHN 32701, 98.6 mm SVL) from Municipio El Tambo, Departamento de Cauca, Colombia (from a kodachrome by Pedro M. Ruiz).

cheiropletbus, *E. necerus*, and *E. zygodactylus*, all of which are large (mean size of adult females ≥ 75 mm SVL) species of *Eleutherodactylus*. Among species of the subgenus *Craugastor*, only *E. anomalus* and *E. necerus* are more southerly in distribution.

• **Fossil Record.** None.

• **Pertinent Literature.** The species was first mentioned by Lynch (1979) as species A in a distributional summary for frogs of the forests west of the Andes. Aside from the original description, only limited additional comments are available. Lynch (1986a) reported the species from Colombia and an additional record was provided by Lynch and Burrowes (1990). Savage et al. (1988) assigned the species to the *rugulosus* group. Otherwise, the name has appeared only in lists.

• **Etymology.** The name *anatipes* is a noun in apposition, from the Latin *anatis* (duck) and *pes* (foot), in reference to the extensive webbing of the toes.

• **Comment.** Lynch and Myers (1983) suggested that *E. anatipes* was most closely related to *E. zygodactylus*, a species they described from the chocoan lowlands of northwestern Colombia. They included the species in the *Eleutherodactylus fitzingeri* group which was recognized as paraphyletic by Lynch (1986b), who placed some of the members in the subgenus *Craugastor* and others in the *conspicillatus* group of the subgenus *Eleutherodactylus*.

At the time of the original description, *E. anatipes* was known from only two localities in Ecuador, but fieldwork in the last decade has established that *E. anatipes* occurs north to the base of the Farallones de Cali (800-1100 m) and is sympatric with *E. zygodactylus*, a species normally found at lower elevations.

Eleutherodactylus anatipes shares the spiculate texture of the skin of the dorsum with *E. anomalus* and *E. bufoniformis*, two other large, streamside species.

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